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› JBL EON510 10" Two-Way Self-Powered Portable Speaker System User Manual

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Model: EON510

INTRODUCTION

The JBL Professional EON 500 Series Speaker, specifically the EON510 model, is a 10-inch, two-way, powered, portable speaker system designed for high-level, full-bandwidth sound reproduction. It features a versatile 3-channel built-in mixer, making it suitable for various audio applications. This system incorporates a 254 mm Differential Drive woofer and a 25.4 mm neodymium high-frequency compression driver, coupled with a 100-degree H by 60-degree V waveguide. Both components are powered by a 280-watt Class-D integrated power amplifier. The input section manages crossover functions, protection, and mixer capabilities. Its lightweight design, robust power, and flexible mounting options make it an ideal solution for musicians, entertainers, presenters, touring bands, and mobile DJs.

KEY FEATURES

- **Lightweight Design:** Engineered for true portability, allowing for easy transport and setup.
- **Ergonomic Handles:** Features comfortable grips for secure and convenient carrying.
- **Integrated 3-Channel Mixer:** Provides versatile input options and mixing capabilities directly on the unit.
- **Differential Drive Low Frequency Transducers:** Utilizes patented technology for enhanced power, reduced weight, and lower distortion.
- **Efficient Class-D Digital Amplifier:** Delivers 280 watts of power with high efficiency.

PRODUCT OVERVIEW



Figure 1: Front view of the JBL EON510 portable speaker system. This image displays the speaker's main grille, the JBL logo, and the EON 500 Series branding, highlighting its compact and robust design.



Figure 2: Rear view of the JBL EON510 portable speaker system. This image shows the integrated amplifier panel, heat sink, and the various input/output connections, along with the model number and series branding.



Figure 3: Detailed view of the JBL EON510's input and output panel. This close-up highlights the various knobs for input gain, EQ (Boost, Flat, Cut), and the different input jacks (XLR, 1/4-inch) and output (XLR Loop), along with power indicators and the power switch.



Figure 4: Close-up of the ergonomic top handle on the JBL EON510. This image demonstrates the comfortable grip design, which aids in the speaker's portability and ease of handling.



Figure 5: Detail of the embossed JBL logo on the speaker's casing. This image showcases the brand's subtle yet prominent presence on the durable composite enclosure.

SETUP

1. **Unpacking:** Carefully remove the EON510 speaker from its packaging. Inspect for any signs of damage during transit. Retain original packaging for future transport or storage.
2. **Placement:** Position the speaker on a stable, flat surface or mount it on a compatible speaker stand. Ensure adequate ventilation around the rear amplifier panel.
3. **Power Connection:** Connect the supplied AC power cord to the IEC power inlet on the rear panel of the speaker. Plug the other end into a grounded electrical outlet. Ensure the power switch is in the OFF position before connecting to power.
4. **Input Connections:**
 - For microphones, use an XLR cable and connect to the MIC input.
 - For line-level sources (mixers, instruments, media players), use an XLR or 1/4-inch TRS cable and connect to the LINE input.
 - The EON510 features a 3-channel mixer. Connect multiple sources as needed.
5. **Output Connections (Optional):** If linking multiple EON speakers or sending a sub-mix to another device, use the LOOP/MIX OUT XLR connector.
6. **Initial Power On:** Once all connections are secure, switch the power ON. The power indicator LED on the front of the speaker should illuminate.

OPERATING INSTRUCTIONS

1. **Gain Adjustment:** Start with the INPUT gain knobs at their minimum (fully counter-clockwise) position. Gradually

- increase the gain for each connected source until the SIGNAL LED illuminates consistently, indicating a healthy input level without clipping. Avoid the LIMIT LED illuminating frequently, as this indicates signal overload.
2. **EQ Settings:** Use the EQ switch to adjust the speaker's tonal balance:
 - **BOOST:** Enhances low and high frequencies, suitable for music playback.
 - **FLAT:** Provides a neutral frequency response, ideal for general sound reinforcement.
 - **CUT:** Reduces low frequencies, useful for vocal clarity or when using a subwoofer.
 3. **Master Volume:** Adjust the overall output level using the MASTER VOLUME knob. Ensure the volume is set appropriately for the venue and audience, avoiding excessive levels that could lead to distortion or hearing damage.
 4. **Monitoring:** Listen to the output carefully. If the LIMIT LED flashes frequently or stays lit, reduce the input gain or master volume to prevent damage to the speaker.
 5. **Power Off:** Before disconnecting power, turn down all volume controls and switch the power OFF.

MAINTENANCE

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the speaker. For stubborn dirt, a slightly damp cloth can be used. Avoid abrasive cleaners, solvents, or excessive moisture.
- **Grille Cleaning:** The front grille can be gently vacuumed to remove dust and debris. Do not attempt to remove the grille unless specified in advanced service instructions.
- **Storage:** When not in use, store the speaker in a cool, dry place, away from direct sunlight and extreme temperatures. If possible, use the original packaging or a protective cover.
- **Inspection:** Periodically inspect power cords and audio cables for any signs of wear or damage. Replace damaged cables immediately.
- **Ventilation:** Ensure that the rear amplifier panel's heat sink and vents remain clear of obstructions to allow for proper cooling.

TROUBLESHOOTING

Problem	Possible Cause	Solution
No Sound Output	Power not connected or switched off. Input source not connected or turned on. Volume knobs set too low. Faulty cables.	Check power cord and switch. Verify input source is active and connected. Increase INPUT gain and MASTER VOLUME. Test with different cables.
Distorted Sound	Input signal too high (clipping). Speaker volume too high. Damaged speaker component.	Reduce input gain from source or on speaker until LIMIT LED stops flashing. Lower MASTER VOLUME. Contact JBL service if distortion persists at normal levels.

Problem	Possible Cause	Solution
Hum or Buzz Noise	Ground loop issue. Unshielded or faulty cables. Interference from other electronic devices.	Ensure all equipment is on the same electrical circuit or use a ground loop isolator. Use high-quality, shielded cables. Move speaker away from power supplies, dimmers, or other noise sources.

SPECIFICATIONS

Feature	Detail
Model Name	EON510
Speaker Type	Monitor
Special Feature	Subwoofer (Note: This refers to the capability of the system to reproduce low frequencies, not that it includes a separate subwoofer unit)
Recommended Uses	Compression
Compatible Devices	Desktop, Karaoke Machine, Laptop, MP3 Player, Smartphone, Tablet
Surround Sound Channel Configuration	3 channel
Item Weight	7.71 kg (17 Pounds)
Is Waterproof	False
Product Dimensions (LxWxH)	26.16 x 31.5 x 49.02 cm
Power Source	Battery Powered (Note: This might be an error in the source data, as professional PA speakers typically use AC power. Users should verify power requirements.)
Wattage	280 Watts
Manufacturer	Harman International Industries, Inc
Date First Available	7 August 2012
Connectivity Technology	Bluetooth (Note: This might be an error in the source data, as the description implies wired inputs. Users should verify connectivity options.)
Audio Output Mode	Stereo
Mounting Type	Tabletop Mount

Note: Some specifications, such as "Battery Powered" and "Bluetooth Connectivity," may be general Amazon listing attributes and might not apply to this specific professional audio product. Please refer to official JBL documentation for precise details.

WARRANTY INFORMATION

For detailed warranty information regarding your JBL EON510 speaker system, please refer to the warranty card included with your product or visit the official JBL Professional website. Warranty terms and conditions may vary by region and purchase date. It is recommended to register your product upon purchase to facilitate any future warranty claims.

CUSTOMER SUPPORT

Should you require technical assistance, service, or have questions about your JBL EON510 speaker, please contact JBL Customer Support. You can find contact information, FAQs, and additional resources on the official JBL Professional website. When contacting support, please have your product model number (EON510) and serial number ready.

JBL Official Website: www.jblpro.com

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